



**Supplemental Figure 4. Localized inhibition of CtsK reduced the expression of Collagen Type I in the articular tissue. (A)** IHC staining of Collagen Type I in the articular tissue. The red arrow indicates positive Collagen Type I. Control: untreated DBA/J1 mice; *P.g*: mice orally infected with *Porphyromonas gingivalis*; CIA: mice with collagen-induced arthritis (CIA); GFP: mice received empty AAV vectors (AAV-U6-CAG-EGFP); CtsK: mice received AAV-U6-Ctsk-shRNA-CAG-EGFP.